

## AMENDMENT

A complete listing of the amended claims follows.

### Amendments to the Claims

1. (Currently amended) An apparatus for isolating, in response to a device isolation signal and a bus idle status signal, a device from a bus without interrupting system operation, the apparatus comprising:  
  
bus interface logic in communication with the bus, the bus interface logic generating a signal indicating the idle status of the bus;  
  
an isolation switch in communication with the bus;  
  
protocol checker logic configured to monitor the validity of bus transactions and to generate a device isolation control signal on a device isolation control line; and  
  
isolation control logic in communication with the bus interface logic, the device isolation control line, and the isolation switch,  
  
wherein the isolation control logic transmits an isolation switch control signal to the isolation switch in response to the generated bus idle status signal from the bus interface logic and the received device isolation signal on the device isolation control line.
2. (Original) The apparatus of claim 1 wherein the bus interface logic comprises a state machine.
3. (Original) The apparatus of claim 1 wherein the bus interface logic comprises combinatorial logic.

4. (Original) The apparatus of claim 1 wherein the bus interface logic monitors all bus transactions.
5. (Previously Presented) The apparatus of claim 1 wherein the bus idle status signal generated by the bus interface logic indicates that the bus is idle.
6. (Original) The apparatus of claim 1 wherein the isolation control logic comprises combinatorial logic.
7. (Previously Presented) The apparatus of claim 1 wherein the isolation control logic receives the device isolation signal on the device isolation control line from logic monitoring the operational status of the system.
8. (Previously Presented) The apparatus of claim 1 wherein the isolation control logic receives the device isolation signal on the device isolation control line from a hot-plug logic element.
9. (Previously Presented) The apparatus of claim 8 wherein the hot-plug logic element generates the device isolation signal on the device isolation control line responsive to the physical removal of the device from its slot.
10. (Currently amended) The apparatus of claim 1 wherein the device is isolated from the bus at substantially the same time that the protocol violation was detected .  
~~isolation control logic receives the device isolation signal on the device isolation control line from protocol checker logic monitoring the validity of bus transactions.~~
11. (Previously Presented) The apparatus of claim 10 wherein the protocol checker logic generates the device isolation signal on the device isolation control line responsive to a detected protocol violation.

12. (Currently Amended) The apparatus of claim ~~10~~ 1 wherein the bus transactions are communicated on the bus in relation to clock cycles, and wherein the device is isolated from the bus within one clock cycle of the detected protocol violation.
13. (Previously Presented) The apparatus of claim 12 wherein the protocol checker logic generates the device isolation signal on the device isolation control line during the same clock cycle as the detected protocol violation.
14. (Canceled)
15. (Original) The apparatus of claim 1 wherein the isolation control logic comprises a timer measuring elapsed time.
16. (Original) The apparatus of claim 15 wherein the timer measures elapsed time relative to a system event.
17. (Original) The apparatus of claim 16 wherein a timeout signal is generated in response to the elapsed time exceeding a predetermined threshold.
18. (Previously Presented) The apparatus of claim 17 wherein the isolation control logic transmits a bus reset signal responsive to receiving both the device isolation signal on the device isolation control line and the timeout signal from the timer.
19. (Currently Amended) In a system having a bus controlled by a bus controller, a device isolation control line, and having at least one bus device in communication with the bus via an isolation switch, a method for isolating the bus device from the bus, the method comprising the steps:
- (a) detecting a protocol violation on the bus and generating an isolation control signal on a device isolation control line in response to the detected protocol violation;

- (b) receiving ~~a~~ the isolation control signal on the device isolation control line, the signal identifying a bus device to be isolated, the bus device performing a bus transaction;
  - (c) receiving a bus idle status signal; ~~and~~
  - (d) transmitting an isolation switch control signal responsive to both the received device isolation signal and the received bus idle status signal; and
  - (e) isolating the device from the bus.
20. (Original) The method of claim **19** further comprising the step of isolating the identified bus device from the bus responsive to the received bus device isolation signal.
21. (Original) The method of claim **19** further comprising the step of inhibiting bus access.
22. (Currently Amended) The method of claim **19** further comprising the steps of:
- ~~(a)~~ receiving a timeout signal; and
  - ~~(b)~~ resetting the bus responsive to receiving both the timeout signal and the bus status idle signal indicating that the bus is not idle.
23. (Currently Amended) The method of claim ~~22~~ **19** wherein ~~step (b) comprises~~ isolating the bus controller the device is isolated from the bus at substantially the same time that the protocol violation was detected.
24. (Currently Amended) An apparatus for isolating a device from a bus without interrupting system operation, the apparatus comprising:

means for receiving a signal identifying a bus device to be isolated, the  
identified bus device performing a bus transaction;

means for receiving a bus idle status signal;

means for detecting a protocol violation on the bus and sending an isolation  
control signal to the means for receiving a signal identifying a bus device  
to be isolated in response to the detected protocol violation; and

means for transmitting an isolation switch control signal responsive to both  
the received bus device isolation signal and the received bus idle status  
signal.

25. – 29. (Cancelled)